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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/825,580
Filing Date: April 2, 2001
Appellant(s): EPPIHIMER ET AL.

James P. Kastenmayer
For Appellant

EXAMINER'S ANSWER

This is in response to the Revised Appeal Brief, filed July 6, 2007, appealing from the Office Action, mailed September 28, 2006 and in accordance with the Pre-Appeal Conference Pilot Program, wherein the Panel Decision from Pre-Appeal Brief Review was mailed January 25, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the Brief.

(2) Related Appeals and Interferences

A statement identifying that no related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the Brief.

A copy of the Panel Decision from Pre-Appeal Brief Review dated January 25, 2007 is provided herein in the Appendix to this Examiner's Answer.

The examiner is not aware of any other related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the Brief is correct.

This appeal involves claims 1-20, 25-27, 31-40, 45 and 50-57.

Claims 29-30, 43-44 and 46-49 have been withdrawn from consideration as being drawn to non-elected species.

Claims 21-24, 28, 41 and 42 have been canceled previously.

(4) Status of Amendments After Final

Appellant's statement of the status of amendments after final rejection contained in the Brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the Brief is correct.

In the interest of clarity and in addressing appellant's arguments to distinguish the instant claims from the prior art, the following sections of the specification as-filed are provided herein to indicate the nature of the conditions and patients encompassed and contemplated by the claimed methods as well as interrelationship between these conditions and patients with thrombosis and hypertension.

Thrombosis is a serious condition, which can cause tissue damage, and if untreated, eventually death. Thrombosis reflects, in part, an imbalance between procoagulant and anticoagulant mechanisms (Gross and Aird (2000) *Semin Thromb Hemostat* 26:463) and thrombotic formation is dependent upon platelet and leukocyte aggregation. The interaction of platelets with other platelets and with the endothelial surface of injured blood vessels is a major factor in thrombotic development. Physical injury of an arterial wall may result from vascular intervention procedures such as percutaneous transluminal coronary angioplasty (PTCA) or coronary bypass surgery, leading to the formation of thrombotic reocculsion. Or, thrombosis may result from the progression of a natural disease, such as atherosclerosis. Thrombi that form on atherosclerotic lesions in coronaries are responsible for myocardial ischemia and progression of atherosclerosis (Rauch, *et at.* (2001) *Annals of Internal Medicine* 134(3): 224). Moreover, one of the basic pathophysiological processes underlying the major complications of hypertension *(i.e.,* heart attack and stroke) is thrombogenesis (Lip (2000) *J Hum Hypertension* 14:687).

See page 1 in the Background of the Invention of the instant specification.

A subject who may be at risk for thrombosis is one who suffers from a cardiovascular disease or disorder, e.g., atherosclerosis or hypertension. A subject who may also be at risk for thrombosis is one who has undergone cardiovascular or general-vascular procedures, or-intervention such as angioplasty of any vessel, *e.g.;* carotid, femoral, coronary, etc.; surgical revascularization, *e.g.,* balloon angioplasty,laser angioplasty, percutaneous transluminal coronary angioplasty (PTCA), coronary artery bypass grafting, rotational atherectomy or coronary artery stents, or other intervention, surgical or non-surgical, which may cause vascular injury. A subject may also be at risk for thrombosis following any surgical procedure. Furthermore, a subject may be at risk for thrombosis, *e.g.,* DVT, if the subject is immobilized for prolonged periods of time, such as, for example, a patient during hospitalization. Healthy individuals may also be at risk due to long periods of immobilization, such as, for example, sitting during long trips. Administration of a P-selectin antagonist to modulate thrombosis may be prior to injury, during an intervention procedure, or after the injury or intervention has occurred. In a preferred embodiment, administration of the P-selectin antagonist is prior to surgical intervention, injury, or the onset of thrombus formation.

See pages 6-7, overlapping paragraph, of the instant specification.

In one aspect, the invention provides a method for modulating, *e.g.,* inhibiting, treating, or preventing thrombosis in a subject by administering to the subject a composition which includes an agent which modulates PSGL-1 expression or PSGL-1 activity, *e.g.,* modulates P-selectin or E-selectin binding, modulates cellular adhesion, e.g., cell to cell adhesion *(e.g.,* leukocyte-endothelial cell or leukocyte-platelet adhesion) and cell *(e.g.,* platelet or leukocyte) adhesion to blood vessels, modulates cell *(e.g.,* leukocyte or platelet) migration, *e.g.,* movement relative to blood vessels, modulates leukocyte rolling velocity, and modulates thrombosis. Subjects at risk for thrombosis can be identified by, for example, any or a combination of the diagnostic or prognostic assays described herein or known by one of skill in the art. In particular, subjects at risk for thrombosis are those individuals who suffer from cardiovascular disease. Subjects who are at risk for thrombosis also include those who are undergoing cardiovascular and general vascular procedures or intervention such as surgical revascularization, stenting, PCTA or other intervention, surgical or non-surgical, which causes vascular injury. Subjects at risk for thrombosis, including deep vein thrombosis, include those w]ho have undergone any type of surgical procedure. Moreover, subjects at risk for thrombosis include subjects who are subjected to prolonged immobilization.

Cardiovascular diseases and disorders which place a subject at risk for thrombosis and make them a target for treatment with the P-selectin antagonists of the invention include arteriosclerosis, ischemia reperfusion injury, arterial inflammation, rapid ventricular pacing, aortic bending, vascular heart disease, atrial fibrillation, congestive heart failure, sinus node dysfunction, angina, heart failure, hypertension, atrial fibrillation, atrial flutter, or cardiomyopathy, *e.g.,* dilated cardiomyopathy and idiopathic cardiomyopathy, myocardial infarction, coronary artery disease, coronary artery spasm, and arrhythmia.

See page 32 in Prophylactic And Therapeutic Methods of the instant specification.

(6) Grounds of Rejection to be Reviewed on Appeal

Appellant's statement of the grounds of rejection to be reviewed on appeal is correct, except for the following.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the Brief is correct.

(8) Evidence Relied Upon

A) Araneo et al., U.S. Patent No. 6,150,348.

B) Blann et al., Journal of Human Hypertension 11: 607-609, 1997.

C) Cummings et al., U.S. Patent No. 5,464,778.

D) DeFrees et al., U.S. Patent No. 5,604,207.

E) Johnston et al., J. Immunol. 159: 4514-4523, 1997.

F) Larsen et al., U.S. Patent No. 5,840,679.

G) Lip, Journal of Human Hypertension 14: 687-690, 2000.

H) Maugeri et al., Thrombosis and Haemostasis 72: 450-456, 1994.

I) The Merck Manual of Diagnosis and Therapy, Seventeenth Edition, edited by Beers et al., Merck Research Laboratories, Whitehouse Station, NJ, 1999; see pages 1416-1424, 1629-1646, 1654-1659.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Rejection under 35 U.S.C. § 102(e).

Claims 1-4, 8-13, 16-18, 25-27, 45-47, 50-53 and 57 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Cummings et al. (U.S. Patent No. 5,464,778) (see entire document) and as further evidenced by The Merck Manual of Diagnosis and Therapy, Seventeenth Edition, edited by Beers et al., Merck Research Laboratories, Whitehouse Station, NJ, 1999) and Lip (Journal of Human Hypertension 14: 687-690, 2000) essentially for the reasons of record.

Cummings et al. teach the use of PSGL in the treatment of acute and chronic conditions associated with leukocyte adherence, inflammation and coagulation, including ischemia-reperfusion injury, atherosclerosis and strokes (see column 18, paragraphs 5-8; columns 19-20). Cummings et al. teach the properties and the use of PSGL (column 9-18), including protein fragments thereof (e.g. column 20, paragraph 3) as well as the administration and monitoring according to one of ordinary skill in the art (column 21, paragraphs 2-3).

Although the reference is silent about "hypertension" per se, appellant is reminded that no more of the reference is required than that it sets forth the substance of the invention. The persistently high arterial blood pressure or hypertension associated with the various acute and chronic conditions disclosed in the reference would have been inherently inhibited or treated by the administration of inhibitory PSGL-1 and fragments as taught by Cummings et al. Further, the claimed structural limitations (SEQ ID NO: 2 and P-selectin binding domains thereof) and the claimed functional limitations (e.g. inhibiting wherein the thrombus inducing agent is LTC_4) would have been inherent properties of the referenced methods of treating various conditions such as ischemic-reperfusion injury, atherosclerosis and strokes with PSGL and fragments thereof and the properties of said PSGL and fragments thereof at the time the invention was made.

Given the referenced treating of various conditions associated with thrombotic complications and in particular, ischemia-reperfusion injuries, atherosclerosis and strokes, it would have been inherent that such patients would have been identified as being subjects at risk of thrombosis. Cummings et al. also teach dosage ranges (e.g. 0.2 to 30 mg/kg body weight) for the treatment of said disorders (column 21, paragraph 1). Although this paragraph discloses carbohydrate inhibitors, the ordinary artisan would have immediately envisaged that this broad dosage range would have included other inhibitors (e.g. column 18, paragraph 4) as dictated by the specific condition (column 21, paragraphs 2-3). Also, given the nature of the specific conditions of, ischemia-reperfusion injuries, atherosclerosis and strokes, one of ordinary skill at the time the invention was made would have provide the PSGL prior to thrombus formation in subjects having hypertension.

Although the reference is silent about "a subject having hypertension" per se, it does not appear that the claim language or limitations result in a manipulative difference in the method steps when compared to the prior art disclosure. See Bristol-Myers Squibb Company v. Ben Venue Laboratories 58 USPQ2d 1508 (CAFC 2001). "{i}t is a general rule that merely discovering and claiming a new benefit of an old process cannot render the process again patentable." In re Woodruff, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). The mechanism of action does not have a bearing on the patentability of the invention if the invention was already known or obvious. Mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. In re Wiseman, 201 USPQ 658 (CCPA 1979). Granting a patent on the discovery of an unknown but inherent function would remove from the public that which is in the public domain by virtue of its inclusion in, or obviousness from, the prior art. In re Baxter Travenol Labs, 21 USPQ2d 1281 (Fed. Cir. 1991). See MPEP 2145.

As pointed out previously, it has been noted that treating cardiovascular diseases and conditions such as "atherosclerosis" is consistent with the instant specification (see pages 6-7, overlapping paragraph and the Section on Prophylactic And Therapeutic Methods on page 32 of the instant specification).

Further, The Merck Manual notes that arterial hypertension is a complication of atherosclerosis, cerebrovascular insufficiency with stroke and renal failure (see page 1632, Symptoms and Signs; see Atherosclerosis on pages 1654 - 1658, including page 1656, Hypertension; Cerebrovascular Disease on pages 1417-1424).

Also as noted previously, while appellant / Declarant note that prior art targeted patient populations do not necessarily have or develop hypertension, one of ordinary skill in the art would have immediately envisaged at the time the invention was made that the prior art treatment of ischemia-reperfusion injury, atherosclerosis and strokes was targeting patients with hypertension, including given the prior art teachings of treating the same patient populations as described by the instant specification.

As pointed out previously, and consistent with the Background of the Invention and disclosure of the instant specification concerning hypertension,

the Merck Manual notes that

"Hypertension is the most important risk factor predisposing to stroke";

"It is one of three risk factors, along with cigarette smoking and hypercholesterolemia predisposing to coronary atherosclerosis";

(see Prognosis on page 1634, column 1.

"Hypertension is a more important risk factor for stroke than for atherosclerotic heart disease

(see page 1632, column 1, paragraph 1 of Pathology); and

"Heart failure, symptomatic coronary atherosclerosis, cerebrovascular disease and renal failure require urgent and judicious antihypertensive therapy

(see page 1634, column 2, paragraph 1 of Antihypertensive drug therapy).

As noted by Lip, Journal of Human Hypertension,

"hypertension is well-recognized to be an important contributor to heart attacks and stroke" and that "hypertension it thrombotic in nature".

See entire document, particularly the Introduction on page 687.

This teaching by Lip is consistent with page 1, paragraph 3 in the Background of the Invention of the instant specification notes that:

"Moreover, one of the basic pathophysiological processes underlying the major complications of hypertension (i.e. heart attack and stroke) is thrombogenesis (Lip (2000) J Hum Hypertension 14:687)."

On this record, it is reasonable to conclude that the same patient(s) is (are) being administered the same active agent by the same mode of administration in the same amount in both the instant claims and the prior art reference. The fact that appellant may have discovered yet another beneficial effect from the method set forth in the prior art does not mean that they are entitled to receive a patent on that method.

Again and in contrast to appellant's / Declarant's statements, the record is clear that the missing descriptive matter of "a subject having hypertension" was necessarily present in the targeted patient populations and/or immediately envisaged as target populations ordinary artisan would have, given that "hypertension" was the an important if not the most important risk factor predisposing said conditions and that said targeted populations are consistent with appellant's own disclosure as filed.

Appellant's arguments have not been found persuasive.

Rejection under 35 U.S.C. § 103(a). original

Claims 1-20, 25-27, 31-40, 45 and 50-57 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cummings et al. (U.S. Patent No. 5,464,778) AND Larsen et al. (U.S. Patent No. 5,840,679) in further view of Blann et al. (Journal of Human Hypertension 11: 607-609, 1997), Araneo et al. (U.S. Patent No. 6,150,348) and DeFrees et al. (U.S. Patent No. 5,604,207) and in further evidence of The Merck Manual of Diagnosis and Therapy, Seventeenth Edition, edited by Beers et al., Merck Research Laboratories, Whitehouse Station, NJ, 1999) and Lip (Journal of Human Hypertension 14: 687-690, 2000) for the reasons of record.

Cummings et al. teach the use of PSGL in the treatment of leukocyte adherence, inflammation and coagulation, including ischemia-reperfusion injury, strokes and atherosclerosis (see column 18, paragraphs 5-8; columns 19-20, overlapping paragraph). Cummings et al. teach the properties and the use of PSGL (column 9-18), including protein fragments thereof (e.g. column 20, paragraph 3) as well as the administration and monitoring according to one of ordinary skill in the art (column 21, paragraphs 2-3). The claimed functional limitations would be expected properties of the referenced methods of treating atherosclerosis with PSGL and fragments thereof.

Cummings et al. differs from the claimed PSGL by not disclosing particular human PSGL sequences and domain structure thereof. Larsen et al. teach the structure, including the domain structure and the use of PSGL-derived fragments which are the same or nearly the same as that claimed (see columns 9-15).

Larsen et al. teach the use of PSGL (e.g. ; columns 7-8, columns 13-18 and Examples), including fragments (e.g. columns 9-10) and fragments fused to carrier molecules such as immunoglobulins (e.g. chimeric forms of said PSGL (column 9-10, overlapping paragraph) to treat conditions characterized by P- or E-selectin mediated intercellular adhesion, such as myocardial infarction (columns 15-16, overlapping paragraph), including its combination with other pharmaceutical compositions, including anti-inflammatory and thrombolytic or anti-thrombotic agents (e.g. columns 16-18) (see entire document, including Summary of the Invention; Detailed Description of the Invention).

Although Cummings et al. and Larsen et al. do not disclose all of the effective amounts recited in the instant claims 18-20, Cummings et al. and Larsen et al. teach the art known provision effective amounts of PSGL which inhibit P-selectin binding to treat thrombotic conditions to meet the severity of the condition and the needs of the patients. Therefore, the modes of administration and dosages encompassed by the claimed invention (claims 17-20) would have been met by the ordinary artisan at the time the invention was made to meet the severity of the conditions and the needs of the patients. For example, Larsen et al. also teach various modes of administration and dosing (e.g. pharmaceutical carriers), including combinations of agents would be provided in therapeutically effective amounts either serially or simultaneously sufficient for the needs of the patient, including the nature and severity of the condition being treated according to the attending physician (columns 16-18).). Given the referenced treating of various acute and chronic conditions associated with thrombotic complications, it would have been inherent that such patients would have been identified as being subjects at risk of thrombosis.

The persistently high arterial blood pressure or hypertension associated with the various acute and chronic conditions disclosed in the reference would have been intrinsically inhibited or treated by the administration of inhibitory PSGL-1 and fragments as taught by Larsen et al. Although Cummings et al. and Larsen et al. do not disclose inhibiting hypertension and deep vein thrombosis by inhibiting P-selectin-PSGL-1 interactions per se, Blann et al., Araeneo et al. and DeFrees et al. all teach the role of such interactions in various thrombotic conditions, including hypertension and deep vein thrombosis at the time the invention was made.

Blann et al. teach that it was known that increased plasma levels of platelet specific products such as soluble P-selectin have been taken to imply increased platelet activation and that reversible platelet activation is present in hypertension (see entire document, including the Introduction). Blann et al. conclude that such changes associated with platelet activation may be partly responsible for the increases risk of thrombotic stroke and indicates that therapeutic strategies aimed at rescuing platelet activity may be beneficial (page 608, column 2, last paragraph).

Araneo et al. teach methods of preventing or reducing reperfusion injuries as well as ARDS, including preventing or reducing pulmonary hypertension via inhibiting the expression of P-selectin on endothelium (see entire document, including Summary of the Invention on columns 10-11 and Detailed Description of the Invention, including columns 11, 17 and Examples).

DeFrees et al. teach inhibitors of P-selectin-ligand interactions are especially useful in minimizing tissue damage that accompanies thrombotic disorders, including having therapeutic value in treating patients with stoke, myocardial infarctions, deep vein thrombosis and pulmonary embolism (see entire document, including column 45, paragraph 2).

As pointed out previously, it has been noted that treating "atherosclerosis" is consistent with the instant specification (see pages 6-7, overlapping paragraph of the instant specification and the Section on Prophylactic And Therapeutic Methods on page 32 of the instant specification).

Further, The Merck Manual notes that arterial hypertension is a complication of atherosclerosis, cerebrovascular insufficiency with stroke and renal failure (see page 1632, Symptoms and Signs; see Atherosclerosis on pages 1654 - 1658, including page 1656, Hypertension; Cerebrovascular Disease on pages 1417-1424).

As noted by Lip, Journal of Human Hypertension,

"hypertension is well-recognized to be an important contributor to heart attacks and stroke" and that "hypertension it thrombotic in nature".

See entire document, particularly the Introduction on page 687.

This is consistent with the disclosure on page 1, paragraph 3 in the Background of the Invention of the instant specification notes that:

"Moreover, one of the basic pathophysiological processes underlying the major complications of hypertension (i.e. heart attack and stroke) is thrombogenesis (Lip (2000) J Hum Hypertension 14:687)."

As pointed out previously, and consistent with the Background of the Invention and disclosure of the instant specification concerning hypertension,

the Merck Manual notes that

"Hypertension is the most important risk factor predisposing to stroke";

"It is one of three risk factors, along with cigarette smoking and hypercholesterolemia predisposing to coronary atherosclerosis";

(see Prognosis on page 1634, column 1.

"Hypertension is a more important risk factor for stroke than for atherosclerotic heart disease

(see page 1632, column 1, paragraph 1 of Pathology); and

"Heart failure, symptomatic coronary atherosclerosis, cerebrovascular disease and renal failure require urgent and judicious antihypertensive therapy

(see page 1634, column 2, paragraph 1 of Antihypertensive drug therapy).

On this record, it is reasonable to conclude that the same patient(s) is (are) being administered the same active agent by the same mode of administration in the same amount in both the instant claims and the prior art reference. The fact that appellant may have discovered yet another beneficial effect from the method set forth in the prior art does not mean that they are entitled to receive a patent on that method.

Although Cummings et al. and Larsen et al. do not disclose the role of LTC_4 in thrombus formation and thrombotic conditions per se, LTC_4 was a known thrombus-inducing agent in thrombus formation and thrombotic conditions. Therefore, one of ordinary skill in the art would have expected that the methods of treating thrombotic conditions taught by Cummings et al. and Larsen et al. would have inhibited the thrombus inducing agent in a subject, including LTC_4 at the time the invention was made.

With respect to the role of LTC_4 in thrombus formation and thrombotic condtions, the following is noted.

Cummings et al. and Larsen et al. differ from the claimed methods by the claimed methods by not disclosing the role of LTC_4 in thrombus formation and thrombotic conditions per se, LTC_4 was a known thrombus-inducing agent in thrombus formation and thrombotic conditions as taught by Maugeri et al. and

Maugeri et al. teach that is was known at the time the invention was made that LTC_4 was one of the biologically active substances that play a role in inflammation and thrombosis (see entire document). Further, Maugeri et al. teach that anti-P-selectin antibodies can inhibit LTC_4 production (see Abstract, Results and Discussion). Further, Marugeri et al. discuss that neutrophil-platelet interaction via P-selectin plays a role in LTC_4 cooperative synthesis, which play a significant role in sever pathophysiological situations including inflammatory and cardiovascular diseases (see Abstract, Results and Discussion).

Johnston et al. teach that anti-P-selectin antibodies can inhibit inflammatory conditions, including LTC_4 induced leukocyte rolling in vivo (see entire document, including Abstract, Results and Discussion).

Again, although Cummings et al. and Larsen et al. do not disclose the role of LTC_4 in thrombus formation and thrombotic conditions per se, LTC_4 was a known thrombus-inducing agent in thrombus formation and thrombotic conditions, as evidenced by Maugeri et al. and Johnston et al. Therefore, one of ordinary skill in the art would have expected that the methods of treating thrombotic conditions taught by Cummings et al. and Larsen et al. would have inhibited the thrombus inducing agent in a subject, including LTC_4 at the time the invention was made. Further, both Maugeri et al. And Johnston et al. teach that inhibiting P-selectin-mediated events results in the inhibition of thrombus-inducing biological substances, including LTC_4.

One of ordinary skill in the art at the time the invention was made would have been motivated to administer PSGL-1, fragments and chimeric constructs thereof, provided they had the properties of inhibiting PSGL-1-mediated interactions and inflammatory responses, as taught by Cummings et al. and Larsen et al. to treat patients with various thrombotic conditions.

Given the teachings of Cummings et al. and Larsen et al. to inhibit PSGL-1-mediated interactions and inflammatory responses, including those associated with coronary / thrombotic conditions, the ordinary artisan would have had a reasonable expectation of success at the time the invention was made to treat or inhibit and to inhibit the effect of thrombus-inducing agents, as properties of such treatment of PSGL-1-mediated interactions and inflammatory responses.

Given the role and indication of P-selectin in platelet activation and various thrombotic disorders and the clear teaching of the prior art to target such platelet activation via P-selectin, such targeted conditions and disorders would have included hypertension, including pulmonary hypertension associated with ARDS as well as deep vein thrombosis, as taught by Blann et al., Araneo et al., DeFrees et al., The Merck Manual and Lip et al.

From the teachings of the references, it was apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

(10) Response to Argument

Appellant's arguments in conjunction with various legal citations and the Hemmerich Declaration in the Brief on appeal have been fully considered but have not been found persuasive essentially for the reasons of record.

A. Rejection under 35 U.S.C. § 102(e).

Rebuttal: The Subject Matter of the Claims is Not Present Literally Or Inherently in the Prior Art.

Appellant's arguments and the examiner's rebuttal are essentially those addressed above in the rejection under 35 USC 102(e) and of record.

In contrast to appellant's and Declarant's assertions to the contrary,

the prior art Cummings et al. (U.S. Patent No. 5,464,778), including the evidentiary references The Merck Manual of Diagnosis and Therapy, Seventeenth Edition and Lip (Journal of Human Hypertension 14: 687-690, 2000) do make clear

that the missing descriptive matter is necessarily present in the thing described in the prior art Cummings et al.,

that the particular benefits must naturally flow from those methods, even if not recognized explicitly or implicitly as benefits at the time of its disclosure and

that a close relationship existed between the prior art and the later claimed invention for a finding of inherent anticipation.

Appellant and Declarant Hemmerich submit that The Merck Manual describes the distinction between the nature of hypertension and the conditions cited by the prior art Cummings.

Further, appellant in conjunction with the Declaration has asserted that Cummings et al. does not teach inhibiting thrombosis in a subject having hypertension and does not teach that atherosclerosis, strokes and injuries from ischemia and reperfusion are necessarily associated with hypertension.

Here again, appellant / Declarant note that The Merck Manual does not teach that hypertension is necessarily associated with atherosclerosis and notes that hypertension is not listed as a symptom characteristics of atherosclerosis.

However, appellant / Declarant appear to ignore the interrelatedness and the lack of mutual exclusiveness of the Pathology and Pathogenesis of Atherosclerosis (e.g., see pages 1655-1656) as well as the Risk Factors (see pages 1656-1657) and Symptoms and Signs (see page 1657).

This interrelatedness and lack of mutual exclusiveness between the targeted conditions and patient populations as well as thrombosis and hypertension acknowledged by the prior art is consistent with the disclosure of the instant specification, as indicated above in the Section above Summary of the Claimed Subject Matter.

It is noted that the teachings of Cummings et al. of inhibiting leukocyte-, endothlelial- and platelet-mediated interactions and responses and the same targeted patient populations by appellant (e.g., see columns 18-19, including columns 19-20, overlapping paragraph) are consistent with the Pathology and Pathogenesis of Atherosclerosis cited in The Merck Manual as well as the instant specification as filed (see the Section above Summary of the Claimed Subject Matter).

Atherosclerosis is a form or arteriosclerosis characterized by patch subintimal thickening of medium and large arteries, which can reduce or obstruct blood flow. (see page 1655, column 1 of The Merck Manual), which is consistent with hypertension.

While atherosclerosis may be characteristically silent until stenosis, thrombosis, aneurysm or embolus supervenes,

the prior art Cummings et al. teaches treating atherosclerosis, coronary artery obstruction as well as other clinical cardiovascular therapeutic regimens consistent with The Merck Manual as well as the instant specification (see the Section above Summary of the Claimed Subject Matter) as those targeted populations and underlying conditions associated with those targeted populations.

The concern over the silence until stenosis, thrombosis, aneurysm or embolus supervenes described by the Merck Manual does not teach away from treating the same pertinent patient populations encompassed by the claimed methods with the same active agent to achieve the same or nearly the same therapeutic endpoints of treatment via antagonizing leukocyte-, endothlelial- and platelet-mediated interactions and responses.

While appellant tries to argue that the risk of factor or hypertension is only a possibility of association with atherosclerosis or stroke,

again, it is clear that the prior art Cummings et al. teach treating patients with cardiovascular conditions such as atherosclerosis and stroke consistent with targeted patients with hypertension and the same targeted patients disclosed in the specification as filed (e.g. see the Section above Summary of the Claimed Subject Matter and page 1 in the Background of the Invention, pages 6-7, overlapping paragraph and page 32 in Prophylactic And Therapeutic Methods of the instant specification).

In the Section on Prevention, The Merck Manual indicated that the most effective way to prevent the cardiovascular and cerebrovascular complications of atherosclerosis and the associated arterial thrombosis is prevent atherosclerosis itself, including addressing the reversible risk factors such as hypertension (e.g., see Prevention on pages 1657-1658).

While it is acknowledged that the administration of PSGL-1 would not be expected to reverse a patient's cigarette smoking, physical inactivity or eating habits,

administering the same agent into the same patient populations taught by the prior art would have been expected to have the same properties as disclosed in the specification as filed and claimed in the instant methods.

As pointed out previously, it was noted that treating "atherosclerosis" is consistent with the instant specification (See page 6-7, overlapping paragraph of the instant specification and page 32 in Prophylactic And Therapeutic Methods of the instant specification).

The Merck Manual notes that arterial hypertension is a complication of atherosclerosis, cerebrovascular insufficiency with stroke and renal failure (see page 1632, Symptoms and Signs; see Atherosclerosis on pages 1654 - 1658, including page 1656, Hypertension; Cerebrovascular Disease on pages 1417-1424).

As noted previously, while appellant / Declarant assert that prior art targeted patient populations do not necessarily have or develop hypertension,

one of ordinary skill in the art would have immediately envisaged at the time the invention was made that the prior art treatment of ischemia-reperfusion injury, atherosclerosis and strokes was targeting patients with hypertension.

However, appellant / Declarant continue to dismiss that one of ordinary skill in the art would have immediately envisaged "treating or inhibiting thrombosis in a subject having hypertension",

given the prior art teachings of treating the same patient populations with the same active agent to achieve the same therapeutic end results via the same mechanism of action as described by the instant specification.

For example, page 1, paragraph 3 in the Background of the Invention of the instant specification notes that:

"Moreover, one of the basic pathophysiological processes underlying the major complications of hypertension (i.e. heart attack and stroke) is thrombogenesis (Lip (2000) J Hum Hypertension 14:687)."

This teaching by Lip in the Background of the Invention herein is same teaching by Lip in the prior art, that is,

"hypertension is well-recognized to be an important contributor to heart attacks and stroke" and that "hypertension it thrombotic in nature".

See entire document, particularly the Introduction on page 687.

The Section on Prophylactic And Therapeutic Methods on page 32 of the instant specification describes inhibiting, treating or preventing thrombosis with the cardiovascular diseases taught by the prior art.

As pointed out previously, and consistent with the Background of the Invention and disclosure of the instant application,

the Merck Manual notes that

"Hypertension is the most important risk factor predisposing to stroke";

"It is one of three risk factors, along with cigarette smoking and hypercholesterolemia predisposing to coronary atherosclerosis";

(see Prognosis on page 1634, column 1.

"Hypertension is a more important risk factor for stroke than for atherosclerotic heart disease

(see page 1632, column 1, paragraph 1 of Pathology); and

"Heart failure, symptomatic coronary atherosclerosis, cerebrovascular disease and renal failure require urgent and judicious antihypertensive therapy

(see page 1634, column 2, paragraph 1 of Antihypertensive drug therapy).

Appellant's arguments in conjunction with the Hemmerich Declaration have been fully considered but have not been found persuasive, particularly given the well known recognition that hypertension was an important, if not the most important contributor or risk factor to heart attacks and strokes, including atherosclerotic heart disease, and that the complications of hypertension are thrombotic in nature at the time the invention was made by the ordinary artisan and acknowledged in applicant's own disclosure as well and provided by the teachings of Lip (see entire document, including the Introduction on page 687, column 1), cited in the Background of the Invention in the instant specification.

Although the reference is silent about "hypertension" per se, applicant is reminded that no more of the reference is required than that it sets forth the substance of the invention. The persistently high arterial blood pressure or hypertension associated with the various acute and chronic conditions disclosed in the reference would have been inherently inhibited or treated by the administration of inhibitory PSGL-1 and fragments as taught by Cummings et al. Further, the claimed structural limitations (SEQ ID NO: 2 and P-selectin binding domains thereof) and the claimed functional limitations (e.g. inhibiting wherein the thrombus inducing agent is LTC_4) would have been inherent properties of the referenced methods of treating various conditions such as ischemic-reperfusion injury, atherosclerosis and strokes with PSGL and fragments thereof and the properties of said PSGL and fragments thereof at the time the invention was made.

Given the referenced treating of various conditions associated with thrombotic complications and in particular, ischemia-reperfusion injuries, atherosclerosis and strokes, it would have been inherent that such patients would have been identified as being subjects at risk of thrombosis. Also, given the nature of the specific conditions of, ischemia-reperfusion injuries, atherosclerosis and strokes, one of ordinary skill at the time the invention was made would have provide the PSGL prior to thrombus formation in subjects having hypertension.

Although the reference is silent about "a subject having hypertension" per se, it does not appear that the claim language or limitations result in a manipulative difference in the method steps when compared to the prior art disclosure. See Bristol-Myers Squibb Company v. Ben Venue Laboratories 58 USPQ2d 1508 (CAFC 2001). "{i}t is a general rule that merely discovering and claiming a new benefit of an old process cannot render the process again patentable." In re Woodruff, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). The mechanism of action does not have a bearing on the patentability of the invention if the invention was already known or obvious. Mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. In re Wiseman, 201 USPQ 658 (CCPA 1979). Granting a patent on the discovery of an unknown but inherent function would remove from the public that which is in the public domain by virtue of its inclusion in, or obviousness from, the prior art. In re Baxter Travenol Labs, 21 USPQ2d 1281 (Fed. Cir. 1991). See MPEP 2145.

On this record, it is reasonable to conclude that the same patient is being administered the same active agent by the same mode of administration in the same amount in both the instant claims and the prior art reference. The fact that applicant may have discovered yet another beneficial effect from the method set forth in the prior art does not mean that they are entitled to receive a patent on that method.

Again and in contrast to appellant's / Declarant's statements, the record is clear that the missing descriptive matter of "a subject having hypertension" was necessarily present in the targeted patient populations and/or immediately envisaged as target populations ordinary artisan would have, given that "hypertension" was the an important if not the most important risk factor predisposing said conditions and that said targeted populations are consistent with applicant's own disclosure.

Appellant's arguments have not been found persuasive.

B. Rejection under 35 U.S.C. § 103(a).

Rebuttal: The Subject Matter of the Claims is Not Obvious.

Appellant's arguments in conjunction with the Hemmerich Declaration under 37 CFR 1.132, filed 9/13/06, have been fully considered but have not been convincing essentially for the reasons of record and that addressed herein..

Appellant argues that hypertension and thrombosis need not coexist and that none of the publications supply the necessary link between hypertension, thromboses and treatment with PSGL-1.

Appellant cites KSR Int'l Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007) to stand for the proposition that "demonstrating a teaching, suggestion, or motivation to combine known elements in order to show the combination is obvious ... , captures a helpful insight" to counter the obviousness rejection of record.

In contrast to appellant's apparent effort to limit obviousness to the "teaching, suggestion or motivation" (TSM) test of obviousness,

an obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not. See KSR Int'l Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007) ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.").

"The test of obviousness is not express suggestion of the claimed invention in any or all of the references but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them." See In re Rosselet, 146 USPQ 183, 186 (CCPA 1965).

"There is no requirement (under 35 USC 103(a)) that the prior art contain an express suggestion to combine known elements to achieve the claimed invention. Rather, the suggestion to combine may come from the prior art, as filtered through the knowledge of one skilled in the art." Motorola, Inc. v. Interdigital Tech. Corp., 43 USPQ2d 1481, 1489 (Fed. Cir. 1997).

It does not appear that the claim language or limitations result in a manipulative difference in the method steps when compared to the combination of the prior art disclosure in motivating the ordinary artisan to administer PSGL-1 to the same patients as the instant disclosure.

Given that the prior art goal was to treat patients undergoing cardiovascular complications or procedures as patients in need of being treated with PSGL-1,

incorporating PSGL-1 in therapeutic regimens with patients undergoing cardiovascular complications and procedures would have been routine to the ordinary artisan at the time the invention was made and therefore obvious in designing such methods to effectively treat or inhibit thrombosis in a subject with hypertension.

Appellant /Declarant submit that the teachings of the prior art would not suggest to the ordinary artisan that PSGL-1 could treat a patient having hypertension.

Here, again, it is noted that once a prima facie case of obviousness has been made the burden of going further is shifted to applicant. In re Keller, 208 USPQ 871, 882 (CCPA 1981).

This appellant has not done, but rather argues the references individually and not their combination.

One cannot show non-obviousness by attacking references individually where the rejections are based on a combination of references. In re Young, 150 USPQ 725 (CCPA 1968). See MPEP 2145.

The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 145 USPQ 716, 718 (CCPA 1965). See MPEP 716.01(C).

Again, in contrast to appellant's assertions concerning the absence of certain teachings in each of the prior art references (a) – (f),

there was sufficient motivation and expectation in the prior art to treat the same targeted patient populations with the same active agent to achieve the same or nearly the same therapeutic endpoints, including the treating or inhibiting thrombosis in a subject having hypertension as well as .

As pointed out previously and addressed above in the rejection under 35 USC 102,

appellant's arguments in conjunction with the Hemmerich Declaration have been fully considered but have not been found persuasive, particularly given the well known recognition that hypertension was an important, if not the most important contributor or risk factor to heart attacks and strokes, including atherosclerotic heart disease, and that the complications of hypertension are thrombotic in nature at the time the invention was made by the ordinary artisan and acknowledged in applicant's own disclosure as well and provided by the teachings of Lip (see entire document, including the Introduction on page 687, column 1), cited in the Background of the Invention in the instant specification.

Again, appellant asserts that both Cummings et al. and Larsen et al. both discuss using PSGL for treating various conditions, but do not provide teaching or suggestion that hypertension is associated with any of the conditions discussed in these references.

In contrast to appellant's assertions that the primary references Cummings et al. and Larsen et al. do not provide explicitly teaching about hypertension in the diseases and conditions referenced,

a number of references have been added during prosecution to stand for the position that the ordinary artisan readily understood and envisaged that the cardiovascular conditions and patients targeted by inhibiting PSGL-1-P-selectin interactions included treating or inhibiting thrombosis in subjects with hypertension at the time the invention was made.

For example, The Merck Manual of Diagnosis and Therapy, Seventeenth Edition, edited by Beers et al., Merck Research Laboratories, Whitehouse Station, NJ, 1999) and Lip (Journal of Human Hypertension) (see entire document, including Introduction) acknowledged in the Background of the Invention of the instant specification were added to the rejection of record in response to appellant's assertions that such conditions do not read on or render obvious treating "subjects having hypertension".

As noted by Lip, Journal of Human Hypertension,

"hypertension is well-recognized to be an important contributor to heart attacks and stroke" and that "hypertension it thrombotic in nature".

See entire document, particularly the Introduction on page 687.

In contrast to appellant continual assertions that the prior art not teach nor suggest that hypertension is necessarily associated with any of the conditions discussed therein,

the record is clear that the missing descriptive matter of "a subject having hypertension" was present in the targeted patient populations and/or immediately envisaged as target populations ordinary artisan would have,

given that "hypertension" was the an important if not the most important risk factor predisposing said conditions and that said targeted populations are consistent with appellant's own disclosure.

While appellant / Declarant acknowledge that Blann recognized a correlation between platelet activation in hypertension and, in turn, a risk factor for stroke and that compounds that reduce reduce activity could be useful;.

appellant / Declarant submit that Blann et al. does not teach nor suggest compositions having P-selectin ligand activity could be used to treat or inhibit thrombosis, thrombosis formation or deep vein thrombosis in subjects having hypertension.

While appellant / Declarant acknowledge that Araneo describes preventing or reducing effects of ischemia and other conditions such as pulmonary hypertension with steroids and that this results in a reduction in P-selectin expression,

appellant / Declarant submit that this reference does not teach nor suggest compositions having P-selectin ligand activity could be used to treat or inhibit thrombosis, thrombosis formation or deep vein thrombosis in subjects having hypertension.

While appellant / Declarant acknowledge that DeFrees describes analogs of silalyl Le^x and their use to treat inflammatory disorders such as deep vein thrombosis,

appellant / Declarant submit that this reference does not teach nor suggest compositions having P-selectin ligand activity could be used to treat or inhibit thrombosis, thrombosis formation or deep vein thrombosis in subjects having hypertension.

In contrast to appellant's assertions, Blann et al., Araeneo et al. and DeFrees et al. all teach the role of such P-selectin-PSGL-1 and/or leukocyte-, endothelial- or platelet-mediated interactions in various thrombotic conditions, including hypertension and deep vein thrombosis at the time the invention was made.

Blann et al. teach that it was known that increased plasma levels of platelet specific products such as soluble P-selectin have been taken to imply increased platelet activation and that reversible platelet activation is present in hypertension (see entire document, including the Introduction). Blann et al. conclude that such changes associated with platelet activation may be partly responsible for the increases risk of thrombotic stroke and indicates that therapeutic strategies aimed at rescuing platelet activity may be beneficial (page 608, column 2, last paragraph).

Araneo et al. teach methods of preventing or reducing reperfusion injuries, including preventing or reducing pulmonary hypertension via inhibiting the expression of P-selectin on endothelium (see entire document, including Summary of the Invention on columns 10-11 and Detailed Description of the Invention, including columns 11, 17 and Examples).

DeFrees et al. teach inhibitors of P-selectin-ligand interactions are especially useful in minimizing tissue damage that accompanies thrombotic disorders, including having therapeutic value in treating patients with stroke, deep vein thrombosis and pulmonary embolism / hypertension (see entire document, including column 45, paragraph 2).

One of ordinary skill in the art at the time the invention was made would have been motivated to administer PSGL-1, fragments and chimeric constructs thereof, provided they had the properties of inhibiting P-selectin or PSGL-1-mediated interactions and inflammatory responses, as taught by Cummings et al. and Larsen et al. to treat patients with various thrombotic conditions and complications associated with hypertension, including atherosclerosis, stroke, deep vein thrombosis and pulmonary embolism/hypertension.

Given the teachings of Cummings et al. and Larsen et al. to inhibit PSGL-1-mediated interactions and inflammatory responses, including those associated with coronary / thrombotic conditions and complications associated with hypertension, the ordinary artisan would have had a reasonable expectation of success at the time the invention was made to treat or inhibit thrombosis in patients having hypertension, to increase the movement of cells relative to blood vessels and to inhibit the effect of thrombus-inducing agents, as properties of such treatment of PSGL-1-mediated interactions and inflammatory responses.

Given the role and indication of P-selectin in platelet activation and various thombotic disorders and complications and the clear teaching of the prior art to target such platelet activation via P-selectin, such targeted conditions and disorders would have included hypertension, including pulmonary hypertension as well as deep vein thrombosis, as taught by Blann et al., Araneo et al. and DeFrees et al. From the teachings of the references, it was apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Here, in contrast to appellant's assertions concerning the teaching by the prior art of therapy using non-PSGL proteins; there is no discouragement nor skepticism in the prior art for administering PSGL-1 treat subjects with hypertension and in fact, the evidence stands for a different conclusion than applicant, particularly in light of the prior art teachings to provide PSGL-1 to treat a number of conditions as well as the underlying mechanisms associated with thrombosis and hypertension, including those subjects having hypertension

With respect to the role of LTC_4 in thrombus formation and thrombotic conditions per se, the following is noted.

Appellant / Declarant submit that the prior art, including both Maugeri and Johntson, does not explicitly or impliedly provide sufficient motivation and expectation of success in arriving at applicant's invention.

Cummings et al. and Larsen et al. differ from the claimed methods by the claimed methods by not disclosing the role of LTC_4 in thrombus formation and thrombotic conditions per se, LTC_4 was a known thrombus-inducing agent in thrombus formation and thrombotic conditions as taught by Maugeri et al. and

While appellant / Declarant acknowledge that Maugeri speculates about the importance of P-selectin-mediated interactions for the production of LTC_4,

appellant / Declarant submit that this reference not teach nor suggest a relationship between thrombosis formation and hypertension nor methods of treating or inhibiting thrombus formation induced by a thrombus-inducing agent in a subject comprising identifying a subject having hypertension and administering P-selectin ligand to said subjects.

While appellant / Declarant acknowledge that Johnston investigates the ability of anti-P-selectin antibody to inhibit LTC_4-induced leukocyte rolling and speculates about anti-inflammatory strategies,

appellant / Declarant submit that this reference does not identify the use of P-selectin protein, nor the relationship between thrombosis and hypertension

Here again and as pointed out previously and in contrast to appellant's assertions of lack of relevant teachings,

Maugeri et al. teach that is was known at the time the invention was made that LTC_4 was one of the biologically active substances that play a role in inflammation and thrombosis (see entire document). Further, Maugeri et al. teach that anti-P-selectin antibodies can inhibit LTC_4 production (see Abstract, Results and Discussion). Further, Marugeri et al. discuss that neutrophil-platelet interaction via P-selectin plays a role in LTC_4 cooperative synthesis, which play a significant role in sever pathophysiological situations including inflammatory and cardiovascular diseases (see Abstract, Results and Discussion).

In addition, Johnston et al. teach that anti-P-selectin antibodies can inhibit inflammatory conditions, including LTC_4 induced leukocyte rolling in vivo (see entire document, including Abstract, Results and Discussion).

Again, although the primary references Cummings et al. and Larsen et al. do not disclose the role of LTC_4 in thrombus formation and thrombotic conditions per se,

LTC_4 was a known thrombus-inducing agent in thrombus formation and thrombotic conditions, as evidenced by Maugeri et al. and Johnston et al.

Therefore, one of ordinary skill in the art would have expected that the methods of treating thrombotic conditions taught by Cummings et al. and Larsen et al. would have inhibited the thrombus inducing agent in a subject, including LTC_4 at the time the invention was made.

Further, both Maugeri et al. and Johnston et al. teach that inhibiting P-selectin-mediated events results in the inhibition of thrombus-inducing biological substances, including LTC_4.

In conclusion, one of ordinary skill in the art at the time the invention was made would have been motivated to administer PSGL-1, fragments and chimeric constructs thereof, provided they had the properties of inhibiting PSGL-1-mediated interactions and inflammatory responses, as taught by Cummings et al. and Larsen et al. to treat patients with various thrombotic conditions. Given the teachings of Cummings et al. and Larsen et al. to inhibit PSGL-1-mediated interactions and inflammatory responses, including those associated with coronary/thrombotic conditions, the ordinary artisan would have had a reasonable expectation of success at the time the invention was made to treat or inhibit and to inhibit the effect of thrombus-inducing agents, as properties of such treatment of PSGL-1-mediated interactions and inflammatory responses.

Given the role and indication of P-selectin in platelet activation and various thombotic disorders and the clear teaching of the prior art to target such platelet activation via P-selectin, such targeted conditions and disorders would have included hypertension, as evidenced by The Merck Manual and Lip, including pulmonary hypertension as well as deep vein thrombosis, as taught by Blann et al., Araneo et al. and DeFrees et al. From the teachings of the references, it was apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

In response to appellant's arguments that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine 5 USPQ2d 1596 (Fed. Cir 1988) and In re Jones 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case the teachings of the prior art pertain to inhibiting P-selectin : PSGL-1 mediated and / or platelet-mediated interactions and functions in the treatment of various conditions and diseases associated or linked with hypertension and indicate success in administering PSGL to treat such conditions and diseases to solve a similar problems associated with the above-mentioned conditions and diseases would have led one of ordinary skill in the art at the time the invention was made to combine the references to solve a well known problem in the art. The strongest rationale for combining reference is a recognition, expressly or implicitly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent that some advantage or expected beneficial result would have been produced by their combination In re Sernaker 17 USPQ 1, 5-6 (Fed. Cir. 1983) see MPEP 2144.

Although appellant's arguments have focused on the absence concerning "a subject having hypertension" in the primary references per se and arguing each reference individually,

it does not appear that the claim language or limitations result in a manipulative difference in the method steps when compared to the prior art disclosure. See Bristol-Myers Squibb Company v. Ben Venue Laboratories 58 USPQ2d 1508 (CAFC 2001). "{i}t is a general rule that merely discovering and claiming a new benefit of an old process cannot render the process again patentable." In re Woodruff, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). The mechanism of action does not have a bearing on the patentability of the invention if the invention was already known or obvious. Mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. In re Wiseman, 201 USPQ 658 (CCPA 1979). Granting a patent on the discovery of an unknown but inherent function would remove from the public that which is in the public domain by virtue of its inclusion in, or obviousness from, the prior art. In re Baxter Travenol Labs, 21 USPQ2d 1281 (Fed. Cir. 1991).

On this record, it is reasonable to conclude that the same patient(s) is (are) being administered the same active agent by the same mode of administration in the same amount in both the instant claims and the prior art reference. The fact that appellant may have discovered yet another beneficial effect from the method set forth in the prior art does not mean that they are entitled to receive a patent on that method.

Appellant's arguments have not been found persuasive.

(11) Related Proceedings Appendix.

A copy of the Panel Decision from Pre-Appeal Brief Review dated January 25, 2007 for the instant USSN 09/825,580 identified in the Related Appeals and Interferences Section of this Examiner's Answer has been provided herein.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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October 15, 2007

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Related Proceedings Appendix

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Please find below and/or attached an Office communication concerning this application or proceeding.

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	09/825,580	EPPIHIMER ET AL.	
	Phillip Gambel	Art Unit 1644	

Document Code - AP.PRE.DEC

Notice of Panel Decision from Pre-Appeal Brief Review

This is in response to the Pre-Appeal Brief Request for Review filed 12/28/06.

1. ☐ **Improper Request** – The Request is improper and a conference will not be held for the following reason(s):

   ☐ The Notice of Appeal has not been filed concurrent with the Pre-Appeal Brief Request.
   ☐ The request does not include reasons why a review is appropriate.
   ☐ A proposed amendment is included with the Pre-Appeal Brief request.
   ☐ Other:

The time period for filing a response continues to run from the receipt date of the Notice of Appeal or from the mail date of the last Office communication, if no Notice of Appeal has been received.

2. ☒ **Proceed to Board of Patent Appeals and Interferences** – A Pre-Appeal Brief conference has been held. The application remains under appeal because there is at least one actual issue for appeal. Applicant is required to submit an appeal brief in accordance with 37 CFR 41.37. The time period for filing an appeal brief will be reset to be one month from mailing this decision, or the balance of the two-month time period running from the receipt of the notice of appeal, whichever is greater. Further, the time period for filing of the appeal brief is extendible under 37 CFR 1.136 based upon the mail date of this decision or the receipt date of the notice of appeal, as applicable.

   ☒ The panel has determined the status of the claim(s) is as follows:
   Claim(s) allowed: *none*.
   Claim(s) objected to: *none*.
   Claim(s) rejected: *1-20,25-27, 31-40, 45 & 50-57*.
   Claim(s) withdrawn from consideration: *29-30, 43-44 & 46-49,*.

3. ☐ **Allowable application** – A conference has been held. The rejection is withdrawn and a Notice of Allowance will be mailed. Prosecution on the merits remains closed. No further action is required by applicant at this time.

4. ☐ **Reopen Prosecution** – A conference has been held. The rejection is withdrawn and a new Office action will be mailed. No further action is required by applicant at this time.

All participants:

(1) *Phillip Gambel*.

(2) *Jean Witz, TQAS*.

(3) *Christina Chan, SPE, 1644*.

(4)____.